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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/666,928	09/21/2000	Jay Kin Keung	10188	6748

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EXAMINER

VO, HAI

ART UNIT PAPER NUMBER

1771

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/666,928

Applicant(s)

KEUNG ET AL.

Examiner

Hai Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9,10,13-18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-18,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. The art rejections over Keller in combination with several cited references are maintained.
2. The new ground of rejection is made in view of Frogné et al (US 5,178,942).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13, 14, 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al (US 5,691,043) in view of Crighton et al (US 6,235,143) and Kong et al (US 6,503,635). The art rejections are sustained for the following reasons. It appears that nothing in Applicants' specification discloses or suggests a modifier present in the core layer of the plastic film affects the novel or basic characteristics of Applicants' invention. Therefore, Applicant bears the burden in establishing that the modifier materially changes the characteristics of Applicants' invention (MPEP 2112; *In re Delajarte* 143 USPQ 256) in order to overcome the finding of obviousness. It is noted that the specification is completely silent as to the modifier; however, **mere absence of the modifier is not basis for an exclusion**. Accordingly, the language "consisting essentially of" is treated as "comprising" until Applicants provide the evidence or declaration in establishing that the modifier materially changes the characteristics of Applicants' invention. Keller discloses a sealable opaque multilayer polypropylene film having a five-layer construction

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meeting the claim limitations (column 7, lines 24-32). Keller discloses the core layer comprising a blend of an isotactic polypropylene homopolymer and a modifier; and 4 to 8 wt % PBT as a cavitating agent (column 4, line 48, column 7, lines 17-18). Keller discloses the top skin layer comprising polypropylene and SiO₂ (column 8, line 29), the bottom skin layer comprising a terpolymer of ethylene-propylene-butylene (column 8, line 1), SiO₂ (column 8, line 29), 2000 to 15000 ppm silicone oil and 100 to 5000 ppm crosslinked silicone (column 8, lines 40-64). Keller discloses the tie layers comprising propylene and at least one of the tie layers containing 4 to 15 wt % TiO₂ (column 7, lines 25-27). Keller is silent as to methyl acrylate as an antiblocking agent. Crighton discloses a heat sealed polymeric film comprising a polymethacrylate antiblock agent in an amount of 500 to 6000 ppm in the skin layer of the film (column 2, lines 32-34 and 44). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated a polymethacrylate antiblock agent into the top skin layer motivated by the desire to obtain a film having good sealing with high slip on the heat seal jaws.

Keller discloses the ethylene-propylene-butylene terpolymer of the bottom skin layer comprising 1-5 weight percent ethylene and 10-25 weight percent butylenes. Keller does not specifically disclose the melting point of the terpolymer of ethylene-propylene-butylene used in the bottom skin layer (column 8, line 1). Kong teaches that a multilayer film suitable as a packaging material comprises a skin layer including ethylene-propylene-butylene terpolymer that has a composition that is similar to the terpolymer composition disclosed in the Keller reference and exhibits a

melting point of 126°C (column 5, lines 40-45). It is noted that the reported melting point of 126°C is different from the melting point of 122.5°C required by the claims. However, differences in the melting point will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such melting point is critical or provides unexpected results. Therefore, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the ethylene-propylene-butylene terpolymer having the melting point instantly claimed because such a melting point is conventional to the ethylene-propylene-butylene terpolymer and Kong provides necessary details to practice the invention of Keller. The combination of all the cited references meets all the limitations of structure and chemistry required by the claims and thus the resulting film would inherently show an improved tear performance in a hot tack test. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties.

Since the concentration of the additives is a result-effective variable and would have been recognized by one skilled in the art to impart the physical properties of the film with respect to whiteness, opacity, gloss and sealing characteristics. Thus, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the film comprising additives that have the concentration instantly claimed for high whiteness, outstanding opacity, good gloss and excellent sealing properties

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since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involved only routine skill in the art. *In re Aller*, 105 USPQ 233.

With regard to claims 16 and 20, Keller discloses a multiplayer film comprising each skin layer adjacent to the core layer having a thickness from 0.5 to 3 microns (column 8, lines 22-25). Keller discloses a multiplayer film having a thickness ranging from 10 to 60 microns (column 9, lines 37-40). Since the thickness is a result-effective variable and would have been recognized by one skilled in the art to reduce the cost of the production while maintaining a multilayer film with excellent sealing properties. Thus, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the film comprising individual layers that have the thickness instantly claimed to balance the cost effectiveness and sealing properties since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involved only routine skill in the art. *In re Aller*, 105 USPQ 233.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al (US 5,691,043) in view of Crighton et al (US 6,235,143) and Kong et al (US 6,503,635) as applied to claim 13, further in view of Shreck (US 5,681,208). See discussion in the paragraph no. 4 above. Keller fails to teach or suggest a coated silica in the skin layer of the film. Shreck discloses that a polymeric film comprises a skin layer having a coated silica (comparative example 2). Therefore, it would have

been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated a coated silica into the top skin layer motivated by the desire to obtain a film having high gloss and low coefficient of friction.

6. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al (US 5,691,043) in view of Crighton et al (US 6,235,143), Kong et al (US 6,503,635), and Shreck (US 5,681,208) and Falla et al (US 5,674,944). See discussion in the paragraphs no. 4 and 5 above. Keller does not specifically teach the film comprising a phosphite and a fluoropolymer as the additives used in the core layer. Falla discloses a film comprising the additives including a phosphite antioxidant, and a fluoropolymer processing aid (column 6, lines 28 and 34). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated phosphite and fluoropolymer into the core layer motivated by the desire to obtain an ease of handling and stabilize the processing of the product.
7. Claims 13-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frognet et al (US 5,178,942) in view of Crighton et al (US 6,235,143) and Sheppard et al (US 6,455,150). Frognet discloses a multilayer opaque film having a five-layer construction meeting the claim limitations (column 5, lines 30-50). Frognet discloses the core layer consisting of 92% by weight isotactic polypropylene and 8 wt % PBT as a cavitating agent (example 1). It is noted that the pigment particle is not a required component of the core layer (see examples 1 and 5). Frognet discloses the top skin layer comprising polypropylene and SiO₂ (column 11, lines

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35-39), the bottom skin layer comprising a terpolymer of ethylene-propylene-butylene and SiO₂ (column 10, lines 40-41 and column 11, lines 35-39). Frognet discloses the tie layers comprising polypropylene and at least one of the tie layers containing 2 to 6 wt % TiO₂ (column 8, lines 60-62, and column 10, lines 26-27). Frognet is silent as to methyl acrylate as an antiblocking agent. Crighton discloses a heat sealed polymeric film comprising a polymethacrylate antiblock agent in an amount of 500 to 6000 ppm in the skin layer of the film (column 2, lines 32-34 and 44). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a polymethacrylate antiblock agent with the silica antiblock of Frognet for the top skin layer motivated by the desire to obtain a film having better sealing with relatively higher slip on the heat seal jaws than the film with the antiblock agent comprising silica alone.

Frognet does not specifically disclose the melting point of the terpolymer of ethylene-propylene-butylene in the bottom skin layer. Sheppard teaches that a multilayer film suitable as a packaging material comprises a skin layer including ethylene-propylene-butylene terpolymer having a melting point of 100°C to 140°C (column 5, lines 25-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the ethylene-propylene-butylene terpolymer having the melting point instantly claimed because such a melting point is conventional to the ethylene-propylene-butylene terpolymer and Sheppard provides necessary details to practice the invention of Frognet.

Frognnet does not specifically disclose the bottom skin layer comprising a silicone oil and a crosslinked silicone slip agent. Sheppard teaches that a multilayer film suitable as a packaging material comprises a bottom skin layer comprising less than 0.5% by weight silicone oil and crosslinked silicone slip agent (column 6, lines 36-50). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the bottom skin layer comprising silicone oil and crosslinked silicone slip agent for improving machinability and imparting reduction in the coefficient of friction to the surface of the bottom skin layer. Since the concentration of the additives is a result-effective variable and would have been recognized by one skilled in the art to impart the physical properties of the film with respect to whiteness, opacity, gloss and sealing characteristics. Thus, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the film comprising additives that have the concentration instantly claimed for high whiteness, outstanding opacity, good gloss and excellent sealing properties since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involved only routine skill in the art. *In re Aller*, 105 USPQ 233. The combination of all the cited references meets all the limitations of structure and chemistry as required by the claims and thus the resulting film would inherently show an improved tear performance in a hot tack test. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that

products of identical chemical composition can not have mutually exclusive properties.

With regard to claim 15, Frognet does not disclose the film comprising the top skin layer comprising a coated silica. Shreck discloses a polymeric film comprising a skin layer having a coated silica (comparative example 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated a coated silica into the top skin layer motivated by the desire to obtain a film having high gloss and low coefficient of friction.

With regard to claim 20, Frognet discloses a multiplayer film having the core layer comprising about 75% of the total film thickness, the tie layer of 20% of the total film thickness and the skin layer of 5% of the total film thickness (example 5). Since the thickness is a result-effective variable and would have been recognized by one skilled in the art to reduce the cost of the production while maintaining a multilayer film that has excellent sealing properties. Thus, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the film comprising individual layers that have the thickness instantly claimed to balance the cost effectiveness and the sealing properties since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involved only routine skill in the art. *In re Aller*, 105 USPQ 233.

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frognet et al (US 5,178,942) in view of Crighton et al (US 6,235,143) and Sheppard et al (US

6,455,150) and Falla et al (US 5,674,944). See discussion in the paragraph no. 7 above. Frognet does not specifically disclose the film comprising the core layer including a phosphite antioxidant and a fluoropolymer anti-condensing agent. Falla discloses a film comprising the additives including a phosphite antioxidant, and a fluoropolymer processing aid (column 6, lines 28 and 34). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated phosphite and fluoropolymer into the core layer motivated by the desire to obtain an ease of handling and stabilize the processing of the product.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR

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only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

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